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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648-XC153

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Rocky Intertidal Monitoring Surveys on the South Farallon Islands, California
AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments.

SUMMARY: NMFS has received an application from the National Ocean Service's Office of National Marine Sanctuaries Gulf of the Farallones National Marine Sanctuary (GFNMS) for an Incidental Harassment Authorization (IHA) to take marine mammals, by harassment, incidental to rocky intertidal monitoring work and searching for black abalone, components of the Sanctuary Ecosystem Assessment Surveys. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an IHA to GFNMS to incidentally take, by Level B harassment only, marine mammals during the specified activity.

DATES: Comments and information must be received no later than [insert date 30 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: Comments on the application should be addressed to Michael Payne, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910. The mailbox address for providing email comments is ITP.Nachman@noaa.gov. NMFS is not responsible for e-mail

comments sent to addresses other than the one provided here. Comments sent via e-mail, including all attachments, must not exceed a 25-megabyte file size.

Instructions: All comments received are a part of the public record and will generally be posted to <http://www.nmfs.noaa.gov/pr/permits/incidental.htm> without change. All Personal Identifying Information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

An electronic copy of the application containing a list of the references used in this document may be obtained by writing to the address specified above, telephoning the contact listed below (see FOR FURTHER INFORMATION CONTACT), or visiting the internet at: <http://www.nmfs.noaa.gov/pr/permits/incidental.htm>. NMFS is also preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) and will consider comments submitted in response to this notice as part of that process. The EA will be posted at the foregoing internet site once it is finalized. Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Candace Nachman, Office of Protected Resources, NMFS, (301) 427-8401.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 et seq.) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations

are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking, other means of effecting the least practicable impact on the species or stock and its habitat, and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined “negligible impact” in 50 CFR 216.103 as “...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.”

Section 101(a)(5)(D) of the MMPA established an expedited process by which citizens of the United States can apply for an authorization to incidentally take small numbers of marine mammals by harassment. Section 101(a)(5)(D) establishes a 45-day time limit for NMFS review of an application followed by a 30-day public notice and comment period on any proposed authorizations for the incidental harassment of marine mammals. Within 45 days of the close of the comment period, NMFS must either issue or deny the authorization. Except with respect to certain activities not pertinent here, the MMPA defines “harassment” as: “any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].”

Summary of Request

On May 13, 2012, NMFS received an application from GFNMS for the taking of marine mammals incidental to rocky intertidal monitoring work and searching for black abalone. NMFS determined that the application was adequate and complete on July 20, 2012.

GFNMS proposes to continue rocky intertidal monitoring work and the search for black abalone in areas previously unexplored for black abalone for periods of 4-8 days in November 2012 and February 2013. All work will be done only during daylight minus low tides. This is a long-term study that began in 1992 and at present is anticipated to continue beyond November 2013. This IHA, if issued, though, would only be effective for a 12-month period from the date of its issuance. In future years (depending on funding), survey activities may occur in February, August, and November. For purposes of the present application, four sites will be sampled during both November and February, with two additional sites to be sampled in February only. The following specific aspects of the proposed activities are likely to result in the take of marine mammals: presence of survey personnel near pinniped haulout sites and approach of survey personnel towards hauled out pinnipeds. Take, by Level B harassment only, of individuals of five species of marine mammals is anticipated to result from the specified activity.

Description of the Specified Activity and Specified Geographic Region

Since the listing of black abalone as “endangered” under the U.S. Endangered Species Act (ESA; 16 U.S.C. 1531 et seq.), NMFS has requested that GFNMS explore as much of the shoreline as possible, as well as document and map the location of quality habitat for black abalone and the location of known animals. This listing prompted the need to expand the search for black abalone into other areas on the South Farallon Islands (beyond those that have been studied since 1992) to gain a better understanding of the abundance and health of the black abalone population in this remote and isolated location. The monitoring is planned to remain

ongoing, and efforts to assess the status and health of the black abalone population on the South Farallon Islands may take several years, and perhaps decades, because black abalone tend to be very cryptic and difficult to find, especially when they are sparse and infrequent in occurrence. In order for the assessment of black abalone to be more comprehensive, GFNMS needs to expand shore searches in areas beyond the proximity of their quantitative quadrat sampling areas and also into new areas on Southeast Farallon and Maintop (West End) Islands.

Rocky intertidal monitoring on the Farallon Islands is now a component of the GFNMS Sanctuary Ecosystem Assessment Surveys (SEAS) long-term monitoring program and is a necessity to the management and protection of the sanctuary. All GFNMS SEAS monitoring projects are designed to provide documentation on the density and biodiversity of sanctuary natural resources for condition analyses, particularly for a baseline in the event of a major natural or human-induced perturbation. This program has and continues to acquire information on seasonal and annual changes of intertidal species abundances in 1-3 visits per year. The monitoring data, decades from now, can also be used to assess trends and changes from global climate change and ocean acidification, based on range extensions, changes in biodiversity, and changes in density of calcium carbonate-containing organisms.

Routine shore activity will continue to involve the use of only non-destructive sampling methods to monitor rocky intertidal algal and invertebrate species abundances (see Figure 2 in GFNMS' application). At each sampling site, there are three to four permanent 30 x 50 cm (12 x 20 in) quadrat sites that occur in the low, middle, and upper elevation tidal zones (marked by white epoxy pads in the quadrat corners). Three to four random quadrats (unmarked) are also sampled at each site every survey, if time permits. Fifty randomly selected points within each permanent and random quadrat are sampled, using methods described by Foster et al. (1991) and

Dethier et al. (1993). All algal and sessile macroinvertebrate species under each sampling point (loci) are recorded. A photograph is also taken of each labeled quadrat. When completed, a shore walk in the immediate proximity is done by the sampling team to search for select large invertebrates. The length of the shoreline searched in the shore walks is typically about 30 m (98 ft), but plans are to expand this search effort over larger areas for abalone and in more areas. The sampling, photographic documentation, and shore walks for the period of this IHA have been scheduled to occur in November 2012 and February 2013. (In future years, surveys conducted under separate IHA(s) may occur 3 times annually: February, August, and November, based on funding.) Each survey will last for approximately 4 to 8 days. All work will be done only during daylight minus, low tides. Each location (as listed in Tables 2 and 3 in GFNMS' application) will be visited/sampled by three to four biologists, for a duration of 3-4 hours, one to two times each minus tide cycle, during November and February.

Inaccessible shore areas will be surveyed by boat up to once each year, dependent on boat availability and weather conditions. This effort includes the Middle and North Farallon Islands. In this effort, the boat navigates to within 15-100 m (49-328 ft) of the shore, and intertidal species that can be seen through binoculars are recorded (presence/absence). PRBO Conservation Science (PRBO) continues its year round pinniped and seabird research and monitoring efforts on the South Farallon Islands, which began in 1968, under MMPA scientific research permits and IHAs. GFNMS biologists will gain access to the sites via boats operated by PRBO, with disturbance and incidental take authorized via IHAs issued to PRBO. For this reason, GFNMS has not requested authorization for take from disturbance by boat, as incidental take from that activity is authorized in a separate IHA.

Specified Geographic Location and Activity Timeframe

The Farallon Islands consists of a chain of seven islands located approximately 48 km (30 mi) west of San Francisco, near the edge of the continental shelf and in the geographic center of the GFNMS (see Figure 1 in GFNMS' application). The land of the islands above the mean high tide mark is designated as the Farallon National Wildlife Refuge (managed by the U.S. Fish and Wildlife Service [USFWS]), while the shore and subtidal below are in GFNMS. The nearshore and offshore waters are foraging areas for pinniped species discussed in this document.

The two largest islands of the seven islands are the Southeast Farallon and Maintop (aka West End) Islands. These and several smaller rocks are collectively referred to as the South Farallon Islands and are the subject of this IHA request. The two largest islands are separated by only a 9 m (30 ft) wide surge channel. Together, these islands are approximately 49 hectares (120 acres) in size with an intertidal perimeter around both islands of 7.7 km (4.8 mi).

Current areas that are sampled during November and February are: Blow Hole Peninsula; Mussel Flat; Dead Sea Lion Flat; and Low Arch (see Figure 2 in GFNMS' application). Current areas that are sampled only during February are: Raven's Cliff and Drunk Uncle Islet. Areas to be added for intensive black abalone assessment and habitat mapping sampling during November and February include: East Landing; North Landing; Fisherman's Bay; and Weather Service Peninsula on Southeast Farallon Island. Areas to be added for intensive black abalone assessment and habitat mapping during February only include: Ravens' Cliff; Indian Head; Shell Beach; and Drunk Uncle Islet (see Figure 2 in GFNMS' application). Each sample site will be visited one to two times annually per minus tide cycle for 3-4 hours each visit. Tables 2 and 3 in GFNMS' application outline the schedule of sampling visits for each location.

Specific dates of sampling in February and November of each year will vary, as in the past, dependent on tide conditions, boat logistics to the island, staff schedules, island housing

availability, seabird breeding cycles, and at the discretion of Refuge management. Each visit will last approximately 4-8 days in November 2012 and February 2013.

The shorelines on these islands, including areas above the mean high tide elevation, have become more heavily used over time as haulout sites for pinnipeds to rest, give birth, and molt. The intertidal zones where GFNMS conducts intertidal monitoring area also areas where pinnipeds can be found hauled out on the shore. Accessing portions of the intertidal habitat may cause incidental Level B (behavioral) harassment of pinnipeds through some unavoidable approaches if pinnipeds are hauled out directly in the study plots or while biologists walk from one location to another. No motorized equipment is involved in conducting these surveys. The species for which Level B harassment is requested are: California sea lions (Zalophus californianus californianus); harbor seals (Phoca vitulina richardii); northern elephant seals (Mirounga angustirostris); Stellar sea lions (Eumetopias jubatus); and northern fur seals (Callorhinus ursinus).

Description of Marine Mammals in the Area of the Specified Activity

Many of the shores of the two South Farallon Islands provide resting, molting, and breeding habitat for pinniped species: northern elephant seals; harbor seals; California sea lions; northern fur seals; and Steller sea lions. California sea lion is the species anticipated to be encountered most frequently during the specified activity. The other four species are only anticipated to be encountered at some of the sites. Tables 2 and 3 in GFNMS' application outline the average and maximum expected occurrences of each species at each sampling location in November and February, respectively. Numbers are based on weekly surveys conducted by PRBO. The data in these tables are from counts conducted in February and November 2010 and 2011. Figures 3, 4, and 5 in GFNMS' application depict the overlap

between pinniped haulouts and abalone sampling sites. Of the five species noted here, only the eastern stock of Stellar sea lion (which is the stock found in the proposed activity area) is listed as threatened under the ESA and as depleted under the MMPA.

We refer the public to Carretta et al., (2011) for general information on these species which are presented below this section. The publication is available on the internet at:

<http://www.nmfs.noaa.gov/pr/pdfs/sars/po2011.pdf>. Additional information on the status, distribution, seasonal distribution, and life history can also be found in GFNMS' application.

Northern Elephant Seal

Northern elephant seals are not listed as threatened or endangered under the ESA, nor are they categorized as depleted under the MMPA. The estimated population of the California breeding stock is approximately 124,000 animals with a minimum estimate of 74,913 (Carretta et. al., 2011).

Northern elephant seals range in the eastern and central North Pacific Ocean, from as far north as Alaska and as far south as Mexico. Northern elephant seals spend much of the year, generally about nine months, in the ocean. They are usually underwater, diving to depths of about 330-800 m (1,000-2,500 ft) for 20- to 30-minute intervals with only short breaks at the surface. They are rarely seen out at sea for this reason. While on land, they prefer sandy beaches.

Northern elephant seals breed and give birth in California (U.S.) and Baja California (Mexico), primarily on offshore islands (Stewart et al., 1994), from December to March (Stewart and Huber, 1993). Males feed near the eastern Aleutian Islands and in the Gulf of Alaska, and females feed further south, south of 45° N (Stewart and Huber, 1993; Le Boeuf et al., 1993). Adults return to land between March and August to molt, with males returning later than

females. Adults return to their feeding areas again between their spring/summer molting and their winter breeding seasons.

The population on the Farallon Islands has declined by 3.4 percent per year since 1983, and in recent years numbers have fluctuated between 100 and 200 pups (W. Sydeman, D. Lee, unpubl. data). At Southeast Farallon, the population consists of approximately 500 animals (GFNMS, 2012).

California Sea Lion

California sea lions are not listed as threatened or endangered under the ESA, nor are they categorized as depleted under the MMPA. The California sea lion is now a full species, separated from the Galapagos sea lion (Z. wolfebaeki) and the extinct Japanese sea lion (Z. japonicus) (Brunner, 2003; Wolf et al., 2007; Schramm et al., 2009). The estimated population of the U.S. stock of California sea lion is approximately 296,750 animals, and the current maximum population growth rate is 12 percent (Carretta et al., 2011). On the Farallon Islands, California sea lions haul out in many intertidal areas year round, fluctuating from several hundred to several thousand animals.

California sea lion breeding areas are on islands located in southern California, in western Baja California, Mexico, and the Gulf of California. During the breeding season, most California sea lions inhabit southern California and Mexico. Rookery sites in southern California are limited to the San Miguel Islands and the southerly Channel Islands of San Nicolas, Santa Barbara, and San Clemente (Carretta et al., 2011). Males establish breeding territories during May through July on both land and in the water. Females come ashore in mid-May and June where they give birth to a single pup approximately 4-5 days after arrival and will nurse pups for about a week before going on their first feeding trip. Females will alternate

feeding trips with nursing bouts until the pup is weaned between 4 and 10 months of age (NMML, 2010). In central California, a small number of pups are born on Ano Nuevo Island, Southeast Farallon Island, and occasionally at a few other locations; otherwise, the central California population is composed of non-breeders. Breeding animals on the Farallon Islands are concentrated in areas where researchers generally do not visit (PRBO unpub. data).

Pacific Harbor Seal

Pacific harbor seals are not listed as threatened or endangered under the ESA, nor are they categorized as depleted under the MMPA. The estimated population of the California stock of Pacific harbor seals is approximately 30,196 animals (Carretta et. al., 2011).

The animals inhabit near-shore coastal and estuarine areas from Baja California, Mexico, to the Pribilof Islands in Alaska. Pacific harbor seals are divided into two subspecies: P. v. stejnegeri in the western North Pacific, near Japan, and P. v. richardii in the northeast Pacific Ocean. The latter subspecies, recognized as three separate stocks, inhabits the west coast of the continental U.S., including: the outer coastal waters of Oregon and Washington states; Washington state inland waters; and Alaska coastal and inland waters.

In California, over 500 harbor seal haulout sites are widely distributed along the mainland and offshore islands, and include rocky shores, beaches and intertidal sandbars (Lowry et al., 2005). On the Farallon Islands, approximately 40 to 120 Pacific harbor seals haul out in the intertidal areas (PRBO unpublished data). Harbor seals mate at sea, and females give birth during the spring and summer, although, the pupping season varies with latitude. Pups are nursed for an average of 24 days and are ready to swim minutes after being born. Harbor seal pupping takes place at many locations, and rookery size varies from a few pups to many

hundreds of pups. Pupping generally occurs between March and June, and molting occurs between May and July (NCCOS, 2007).

Steller Sea Lion

Steller sea lions consist of two distinct population segments: the western and eastern distinct population segments divided at 144° West longitude (Cape Suckling, Alaska). The eastern distinct population segment of the Steller sea lion is threatened, and the western distinct population segment is endangered under the ESA. Both segments are depleted under the MMPA. The eastern distinct population segment is the one anticipated to occur in the proposed project area. The eastern segment includes sea lions living in southeast Alaska, British Columbia, California, and Oregon.

Steller sea lions range along the North Pacific Rim from northern Japan to California (Loughlin et al., 1984), with centers of abundance and distribution in the Gulf of Alaska and Aleutian Islands, respectively. The species is not known to migrate, but individuals disperse widely outside of the breeding season (late May through early July), thus potentially intermixing with animals from other areas.

In 2011, the estimated population of the eastern distinct population segment ranged from a minimum of 52,847 up to 72,223 animals, and the maximum population growth rate is 12.1 percent (Angliss and Allen, 2011).

The eastern distinct population segment of Steller sea lions breeds on rookeries located in southeast Alaska, British Columbia, Oregon, and California. There are no rookeries located in Washington State. Steller sea lions give birth in May through July, and breeding commences a couple of weeks after birth. Pups are weaned during the winter and spring of the following year.

Despite the wide-ranging movements of juveniles and adult males in particular, exchange between rookeries by breeding adult females and males (other than between adjoining rookeries) appears low, although males have a higher tendency to disperse than females (NMFS, 1995; Trujillo et al., 2004; Hoffman et al., 2006). A northward shift in the overall breeding distribution has occurred, with a contraction of the range in southern California and new rookeries established in southeastern Alaska (Pitcher et al., 2007).

The current population of eastern Steller sea lions in the proposed research area is estimated to number between 50 and 750 animals. Overall, counts of non-pups at trend sites in California and Oregon have been relatively stable or increasing slowly since the 1980s (Angliss and Allen, 2011). PRBO estimates that between 50 and 150 Steller sea lions live on the Farallon Islands. On Southeast Farallon Island, the abundance of females declined an average of 3.6 percent per year from 1974 to 1997 (Sydeman and Allen, 1999). Pup counts on the Farallon Islands have generally varied from five to 15 (Hastings and Sydeman, 2002; PRBO unpub. data).

Northern Fur Seal

Northern fur seals are not listed as threatened or endangered under the ESA, nor are they categorized as depleted under the MMPA. Two stocks of northern fur seals are recognized in U.S. Pacific waters: Eastern Pacific stock and San Miguel Island stock. Adult females and juveniles migrate to the central California area (and Oregon and Washington) from rookeries on San Miguel Island in the Southern California Bight (Carretta et al., 2006) and from the Pribilof Islands in the Bering Sea (NCCOS, 2007).

The most recent population estimate of the San Miguel Island stock is 9,968 animals (Carretta et al., 2011) and is 653,171 animals for the Eastern Pacific stock (Allen and Angliss, 2011). The northern fur seal population on the Farallon Islands has fluctuated greatly over the

past two centuries. Current PRBO weekly counts on Maintop Island show a peak of 296 adult and juvenile northern fur seals and 180 pups in 2011 (PRBO, unpub. data). Although it is difficult to differentiate, animals on the Farallon Islands during the time of the proposed rocky intertidal monitoring are likely from the San Miguel Island stock.

Other Marine Mammals in the Proposed Action Area

California (southern) sea otters (*Enhydra lutris nereis*), listed as threatened under the ESA and categorized as depleted under the MMPA, usually range in coastal waters within 2 km (1.2 mi) of shore. PRBO has not encountered California sea otters on Southeast Farallon Island during the course of seabird or pinniped research activities over the past five years. This species is managed by the USFWS and is not considered further in this notice.

Potential Effects of the Specified Activity on Marine Mammals

The appearance of researchers may have the potential to cause Level B harassment of any pinnipeds hauled out on Southeast Farallon and Maintop (West End) Islands. Although marine mammals are never deliberately approached by abalone survey personnel, approach may be unavoidable if pinnipeds are hauled out in the immediate vicinity of the permanent abalone study plots. Disturbance may result in reactions ranging from an animal simply becoming alert to the presence of researchers (e.g., turning the head, assuming a more upright posture) to flushing from the haul-out site into the water. NMFS does not consider the lesser reactions to constitute behavioral harassment, or Level B harassment takes, but rather assumes that pinnipeds that move greater than 1 m (3.3 ft) or change the speed or direction of their movement in response to the presence of researchers are behaviorally harassed, and thus subject to Level B taking. Animals that respond to the presence of researchers by becoming alert, but do not move or change the

nature of locomotion as described, are not considered to have been subject to behavioral harassment.

Numerous studies have shown that human activity can flush harbor seals off haulout sites (Allen et al., 1984; Calambokidis et al., 1991; Suryan and Harvey, 1999; Mortenson et al., 2000). The Hawaiian monk seal (Monachus schauinslandi) has been shown to avoid beaches that have been disturbed often by humans (Kenyon, 1972). And in one case, human disturbance appeared to cause Steller sea lions to desert a breeding area at Northeast Point on St. Paul Island, Alaska (Kenyon, 1962).

Typically, even those reactions constituting Level B harassment would result at most in temporary, short-term disturbance. In any given study season (i.e., November 2012 and February 2013), the researchers will visit the islands for a total of 4-8 days each of the two months, and each site is not visited during both months. Visits to each site are thus separated by several months. Each site visit typically lasts 3-4 hours. Therefore, disturbance of pinnipeds resulting from the presence of researchers lasts only for short periods of time and is separated by significant amounts of time in which no disturbance occurs. Because such disturbance is sporadic, rather than chronic, and of low intensity, individual marine mammals are unlikely to incur any detrimental impacts to vital rates or ability to forage and, thus, loss of fitness. Correspondingly, even local populations, much less the overall stocks of animals, are extremely unlikely to accrue any significantly detrimental impacts.

There are three ways in which disturbance, as described previously, could result in more than Level B harassment of marine mammals. All three are most likely to be consequences of stampeding, a potentially dangerous occurrence in which large numbers of animals succumb to mass panic and rush away from a stimulus, an occurrence that is not expected on Southeast

Farallon and Maintop Islands. The three situations are (1) falling when entering the water at high-relief locations; (2) extended separation of mothers and pups; and (3) crushing of elephant seal pups by large males during a stampede.

Because hauled-out animals may move towards the water when disturbed, there is the risk of injury if animals stampede towards shorelines with precipitous relief (e.g., cliffs). However, while cliffs do exist on the islands, shoreline habitats near the abalone study sites are of steeply sloping rocks with unimpeded and non-obstructive access to the water. If disturbed, hauled-out animals in these situations may move toward the water without risk of encountering barriers or hazards that would otherwise prevent them from leaving the area. In these circumstances, the risk of injury, serious injury, or death to hauled-out animals is very low. Thus, abalone research activity poses no risk that disturbed animals may fall and be injured or killed as a result of disturbance at high-relief locations.

The risk of marine mammal injury, serious injury, or mortality associated with abalone research increases somewhat if disturbances occur during breeding season. These situations present increased potential for mothers and dependent pups to become separated and, if separated pairs do not quickly reunite, the risk of mortality to pups (through starvation) may increase. Separately, adult male elephant seals may trample elephant seal pups if disturbed, which could potentially result in the injury, serious injury, or mortality of the pups. The risk of either of these situations is greater in the event of a stampede.

The proposed site visits in November and February fall outside of the pupping and breeding seasons for California sea lions, harbor seals, northern fur seals, and Steller sea lions. The most sensitive months for northern elephant seals are generally December through March. However, though elephant seal pups are occasionally present when researchers visit abalone

survey sites, risk of pup mortalities is very low because elephant seals are far less reactive to researcher presence than the other two species. Further, pups are typically found on sand beaches, while study sites are located in the rocky intertidal zone, meaning that there is typically a buffer between researchers and pups. Finally, the caution used by researchers in approaching sites generally precludes the possibility of behavior, such as stampeding, that could result in extended separation of mothers and dependent pups or trampling of elephant seal pups. No research would occur where separation of mother and her nursing pup or crushing of pups can become a concern.

In summary, NMFS does not anticipate that the proposed activities would result in the injury, serious injury, or mortality of pinnipeds because (1) the timing of research visits would preclude separation of mothers and pups for four of the pinniped species, as activities occur outside of the pupping/breeding season and (2) elephant seals are generally not susceptible to disturbance as a result of researchers' presence. In addition, researchers will exercise appropriate caution approaching sites, especially when pups are present and will redirect activities when pups are present.

Anticipated Effects on Marine Mammal Habitat

The only habitat modification associated with the proposed activity is the quadrat locations being marked with marine epoxy. The plot corners are marked with a 3x3 cm (1.2x1.2 in) patch of marine epoxy glued to the benchrock for relocating the quadrat sites. Markers have been in place since 1993, and pinniped populations have increased throughout the islands during this time. Maintenance is sometimes required, which consists of replenishing worn markers with fresh epoxy or replacing markers that have become dislodged. No gas power tools are used, so there is no potential for noise or accidental fuel spills disturbing animals and impacting habitats.

Thus, the proposed activity is not expected to have any habitat-related effects, including to marine mammal prey species, that could cause significant or long-term consequences for individual marine mammals or their populations.

Proposed Mitigation

In order to issue an incidental take authorization (ITA) under Section 101(a)(5)(D) of the MMPA, NMFS must, where applicable, set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (where relevant).

GFNMS proposes to implement several mitigation measures to reduce potential take by Level B (behavioral disturbance) harassment. Measures include: (1) coordinating sampling efforts with other permitted activities (i.e., PRBO and USFWS); (2) conducting slow movements and staying close to the ground to prevent or minimize stampeding; (3) avoiding loud noises (i.e., using hushed voices); (4) vacating the area as soon as sampling of the site is completed; (5) monitoring the offshore area for predators (such as killer whales and white sharks) and avoid flushing of pinnipeds when predators are observed in nearshore waters; (6) using binoculars to detect pinnipeds before close approach to avoid being seen by animals; and (7) rescheduling work at sites where pups are present, unless other means to accomplishing the work can be done without causing disturbance to mothers and dependent pups.

The methodologies and actions noted in this section will be utilized and included as mitigation measures in any issued IHA to ensure that impacts to marine mammals are mitigated to the lowest level practicable. The primary method of mitigating the risk of disturbance to

pinnipeds, which will be in use at all times, is the selection of judicious routes of approach to abalone study sites, avoiding close contact with pinnipeds hauled out on shore, and the use of extreme caution upon approach. In no case will marine mammals be deliberately approached by abalone survey personnel, and in all cases every possible measure will be taken to select a pathway of approach to study sites that minimizes the number of marine mammals potentially harassed. In general, researchers will stay inshore of pinnipeds whenever possible to allow maximum escape to the ocean. Each visit to a given study site will last for approximately 4 hours, after which the site is vacated and can be re-occupied by any marine mammals that may have been disturbed by the presence of abalone researchers. By arriving before low tide, worker presence will tend to encourage pinnipeds to move to other areas for the day before they haul out and settle onto rocks at low tide.

The following measures are proposed for implementation to avoid disturbances to elephant seal pups. Disturbances to females with dependent pups can be mitigated to the greatest extent practicable by avoiding visits to those intertidal sites with pinnipeds that are actively nursing, with the exception of northern elephant seals. The time of year when GFNMS plans to sample avoids disturbance to young, dependent pups, with the exception of northern elephant seals. Thus, early February and November, at minimum, are preferable for the proposed intertidal survey work in order to minimize the risk of harassment. Harassment of nursing northern elephant seal pups may occur but only to a limited extent. Disruption of nursing to northern elephant seal pups will occur only as biologists pass by the area. No flushing on nursing northern elephant seal pups will occur, and no disturbance to newborn northern elephant seals (pups less than one week old) will occur. Moreover, elephant seals have a much higher tolerance of nearby human activity than sea lions or harbor seals. In the event of finding

pinnipeds breeding and nursing, the intertidal monitoring activities will be re-directed to sites where these activities and behaviors are not occurring. This mitigation measure will reduce the possibility of takes by harassment and further reduce the remote possibility of serious injury or mortality of dependent pups.

GFNMS will suspend sampling and monitoring operations immediately if an injured marine mammal is found in the vicinity of the project area and the abalone site sampling activities could aggravate its condition.

NMFS has carefully evaluated GFNMS' proposed mitigation measures and considered a range of other measures in the context of ensuring that NMFS prescribes the means of effecting the least practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another:

- the manner in which, and the degree to which, the successful implementation of the measure is expected to minimize adverse impacts to marine mammals;
- the proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and
- the practicability of the measure for applicant implementation.

Based on our evaluation of the applicant's proposed measures, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on marine mammal species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Proposed Monitoring and Reporting

In order to issue an ITA for an activity, Section 101(a)(5)(D) of the MMPA states that NMFS must, where applicable, set forth “requirements pertaining to the monitoring and reporting of such taking”. The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area.

Currently many aspects of pinniped research are being conducted by PRBO scientists on the Farallon Islands, which includes elephant seal pup tagging and behavior observations with special notice to tagged animals. Additional observations are always desired, such as observations of pinniped carcasses bearing tags, as well as any rare or unusual marine mammal occurrences. GFNMS’ observations and reporting will add to the observational database and ongoing marine mammal assessments on the Farallon Islands.

GFNMS can add to the knowledge of pinnipeds on the South Farallon Islands by noting observations of: (1) unusual behaviors, numbers, or distributions of pinnipeds, such that any potential follow-up research can be conducted by the appropriate personnel; (2) tag-bearing carcasses of pinnipeds, allowing transmittal of the information to appropriate agencies and personnel; and (3) rare or unusual species of marine mammals for agency follow-up.

Proposed monitoring requirements in relation to GFNMS’ abalone research surveys will include observations made by the applicant. Information recorded will include species counts (with numbers of pups/juveniles), numbers of observed disturbances, and descriptions of the disturbance behaviors during the abalone surveys. Observations of unusual behaviors, numbers, or distributions of pinnipeds on the South Farallon Islands will be reported to NMFS and PRBO

so that any potential follow-up observations can be conducted by the appropriate personnel. In addition, observations of tag-bearing pinniped carcasses as well as any rare or unusual species of marine mammals will be reported to NMFS and PRBO.

If at any time injury, serious injury, or mortality of the species for which take is authorized should occur, or if take of any kind of any other marine mammal occurs, and such action may be a result of the proposed abalone research, GFNMS will suspend research activities and contact NMFS immediately to determine how best to proceed to ensure that another injury or death does not occur and to ensure that the applicant remains in compliance with the MMPA.

A draft final report must be submitted to NMFS Office of Protected Resources within 60 days after the conclusion of the 2012-2013 field season or 60 days prior to the start of the next field season if a new IHA will be requested. The report will include a summary of the information gathered pursuant to the monitoring requirements set forth in the IHA. A final report must be submitted to the Director of the NMFS Office of Protected Resources and to the NMFS Southwest Office Regional Administrator within 30 days after receiving comments from NMFS on the draft final report. If no comments are received from NMFS, the draft final report will be considered to be the final report.

Estimated Take by Incidental Harassment

Except with respect to certain activities not pertinent here, the MMPA defines “harassment” as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

All anticipated takes would be by Level B harassment, involving temporary changes in behavior. The proposed mitigation and monitoring measures are expected to minimize the possibility of injurious or lethal takes such that take by injury, serious injury, or mortality is considered remote. Animals hauled out close to the actual survey sites may be disturbed by the presence of biologists and may alter their behavior or attempt to move away from the researchers. No motorized equipment is involved in conducting the proposed abalone monitoring surveys.

As discussed earlier, NMFS considers an animal to have been harassed if it moved greater than 1 m (3.3 ft) in response to the researcher's presence or if the animal was already moving and changed direction and/or speed, or if the animal flushed into the water. Animals that became alert without such movements were not considered harassed. The distribution of pinnipeds hauled out on beaches is not consistent throughout the year. The number of marine mammals disturbed will vary by month and location. PRBO obtains weekly counts of pinnipeds on the South Farallon Islands, dating back to the early 1970s. GFNMS used data collected by PRBO in February and November 2010 and 2011 (since those are the months they propose to conduct their abalone monitoring in 2012 and 2013) to estimate the number of pinnipeds that may potentially be taken by Level B (behavioral) harassment. Table 3 in GFNMS' IHA application and Table 1 here present the maximum numbers of California sea lions, harbor seals, northern elephant seals, northern fur seals, and Steller sea lions that may be present at the various sampling sites in November and February. As indicated in the table, some sites will be sampled in both months and others only in one of the two survey months. Based on this information, NMFS proposes to authorize the take, by Level B harassment only, of 6,850 California sea lions, 175 harbor seals, 225 northern elephant seals, 20 northern fur seals, and 95 Steller sea lions.

These numbers are considered to be maximum take estimates; therefore, actual take may be slightly less if animals decide to haul out at a different location for the day or animals are out foraging at the time of the survey activities.

Negligible Impact and Small Numbers Analysis and Preliminary Determination

NMFS has defined “negligible impact” in 50 CFR 216.103 as “...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.” In making a negligible impact determination, NMFS considers a variety of factors, including but not limited to: (1) the number of anticipated mortalities; (2) the number and nature of anticipated injuries; (3) the number, nature, intensity, and duration of Level B harassment; and (4) the context in which the take occurs.

No injuries or mortalities are anticipated to occur as a result of GFNMS’ rocky intertidal monitoring work and searching for black abalone, and none are proposed to be authorized. The behavioral harassments that could occur would be of limited duration, as researchers only conduct sampling two times per year for a total of 4-8 days each time. Additionally, each site is sampled for approximately 3-4 hours before moving to the next sampling site. Therefore, disturbance will be limited to a short duration, allowing pinnipeds to reoccupy the sites within a short amount of time.

Some of the pinniped species use the islands to conduct pupping and/or breeding. However, with the exception of northern elephant seals, GFNMS will conduct its abalone site sampling outside of the pupping/breeding seasons. GFNMS has proposed measures to minimize impacts to northern elephant seals nursing or tending to dependent pups. Such measures will avoid mother/pup separation or trampling of pups.

Table 1. Estimated number of animals to be disturbed at each sampling site during each month of surveys based on maximum daily counts of pinnipeds estimated from PRBO monitoring data and the total proposed number of Level B harassment takes to be authorized for each species.

	East Landing & Blowhole Peninsula	North Landing & Fisherman's Bay	Dead Sea Lion Flat	Mussel Flat	Low Arch	Weather Service Peninsula**	Raven's Cliff**	Indian Head**	Shell Beach**	Drunk Uncle Islet & Pelican Bowl**	Proposed Level B Take
CA Sea Lion November	5	520	880	180	575	120	NA	NA	NA	NA	
CA Sea Lion February	50	35	850	110	280	215	260	775	1420	575	
Total	55	555	1730	290	855	335	260	775	1420	575	6850
Harbor Seal November	10	10	5	50	-	5	NA	NA	NA	NA	
Harbor Seal February	10	20	10	55	-	-	-	-	-	-	
Total	20	30	15	105	0	5	0	0	0	0	175
N. Elephant Seal November	-	40	25	60	45	-	NA	NA	NA	NA	
N. Elephant Seal February	-	5	5	5	5	-	-	25	10	-	
Total	0	45	30	65	50	-	0	25	10	0	225
N. Fur Seal November	-	-	-	-	-	-	NA	NA	NA	NA	
N. Fur Seal February	-	-	-	-	-	-	-	20	-	-	
Total	0	0	0	0	0	0	0	20	0	0	20
Steller Sea Lion November	-	-	10	-	-	-	NA	NA	NA	NA	
Steller Sea Lion February	-	-	15	15	5	5	5	20	20	-	
Total	0	0	25	15	5	5	5	20	20	0	95

* Estimates above are based on the SEAS team sampling each area once in each month indicated.

NA: Not applicable.

**These areas on Maintop Island (West End Island) will not be sampled in November to minimize disturbance to seabirds and marine mammals.

Of the five marine mammal species anticipated to occur in the proposed activity areas, only the Steller sea lion is listed as threatened under the ESA. The species is also designated as depleted under the MMPA. Table 2 in this document presents the abundance of each species or stock, the proposed take estimates, and the percentage of the affected populations or stocks that may be taken by harassment. Based on these estimates, GFNMS would take less than 1% of each species or stock, with the exception of the California sea lion, which would result in an estimated take of 2.3% of the stock. Because these are maximum estimates, actual take numbers are likely to be lower, as some animals may select other haulout sites the day the researchers are present.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed mitigation and monitoring measures, NMFS preliminarily finds that the rocky intertidal monitoring program will result in the incidental take of small numbers of marine mammals, by Level B harassment only, and that the total taking from the rocky intertidal monitoring program will have a negligible impact on the affected species or stocks.

Table 2. Population abundance estimates, total proposed Level B take, and percentage of population that may be taken for the potentially affected species during the proposed rocky intertidal monitoring program.

Species	Abundance*	Total Proposed Level B Take	Percentage of Stock or Population
Harbor Seal	30,196	175	0.6
California Sea Lion	296,750	6,850	2.3
Northern Elephant Seal	124,000	225	0.2
Steller Sea Lion	58,334-72,223	95	0.1-0.2
Northern Fur Seal	9,968	20	0.2

*Abundance estimates are taken from the 2011 U.S. Pacific Marine Mammal Stock Assessments (Carretta *et al.*, 2012).

Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses

There are no relevant subsistence uses of marine mammals implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not

have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act (ESA)

There is one marine mammal species listed as threatened under the ESA with confirmed or possible occurrence in the proposed project area: the eastern U.S. stock of Steller sea lion. NMFS' Permits and Conservation Division has determined that issuance of the proposed IHA to GFNMS under section 101(a)(5)(D) of the MMPA may affect this species and has initiated consultation with NMFS' Endangered Species Division under section 7 of the ESA for this activity. Consultation will be concluded prior to a determination on the issuance of an IHA.

National Environmental Policy Act (NEPA)

NMFS is currently preparing an Environmental Assessment (EA), pursuant to NEPA, to determine whether the issuance of an IHA to GFNMS for its 2012-2013 rocky intertidal monitoring activities may have a significant impact on the human environment. This analysis and a determination on whether to issue a Finding of No Significant Impact (FONSI) will be completed prior to the issuance or denial of this proposed IHA. This identifies our environmental issues and provides environmental issues relevant to the proposed action. Members of the public are invited to provide comments, and NMFS will consider and evaluate responsive comments as it prepares the EA and decides whether to issue a FONSI.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to authorize the take of marine mammals incidental to GFNMS' rocky intertidal and black abalone monitoring research activities, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: August 16, 2012

Helen M. Golde,
Acting Director,
Office of Protected Resources,
National Marine Fisheries Service.

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